

KOLODTSEV, Kh.I., kand.fiziko-matematicheskikh nauk; BABIY, V.I., kand.-
tekhn.nauk

Testing the gas generator under conditions of priming return and
maximum loads. Teploenergetika 9 no.3:21-25 Mr '62. (MIRA 15:2)

1. Vsesoyuznyy teplotekhnicheskii institut.
(Gas producers) (Gas turbines)

BABIY, V.I.; IVANOVA, I.P.

Application of high-speed motion-picture photography in
studying the motion and burning of coal particles. Usp.
nauch.fot. 9:220-222 '64.

(MIRA 18:11)

ACCESSION NR: AT4026350

S/0000/62/000/000/0125/0132

AUTHOR: Babiy, V. I.

TITLE: Magnetic drum memory devices with phase writing

SOURCE: Konferentsiya po obrabotke informatsii, mashinnomu perevodu i avtomaticheskomu chteniyu teksta. Moscow, 1961. Vy*chislitel'naya i informatsionnaya tekhnika (Information processing and computer technology); sbornik materialov konferentsii. Moscow, 1962, 125-132

TOPIC TAGS: memory, magnetic drum, phase writing

ABSTRACT: The author discusses the use of the magnetic drum as a memory in modern computers. The advantages of this type of memory are pointed out, and methods are considered for increasing the capacity of the memory. The possible density of writing is determined by the choice of the method of magnetic inscription. The author asserts that the method of writing by phase modulation is the best. The magnetic phase writing method is described and its advantages over the amplitude modulation technique are noted. A table is given which shows the spectral composition of number-reproducing signals inscribed by the phase method. On the basis of the results obtained, it is possible to reach conclusions concerning the passband of the reading amplifier for the transmission of a

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ACCESSION NR: AT4026350

signal with permissible distortions. At a cadence frequency of 100 kc, it was found that a reading amplifier with a passband of 20 - 120 kc provides for permissible distortions. In the second part of the article, the author discusses recently conducted experimental work with a magnetic drum memory using phase writing, as well as a new kind of floating head and developments in writing and reading amplifier circuitry. The work was performed on a drum 150 mm in diameter, covered with a 3-micron nickel layer. Recording cadence frequency was 100 kc. The cadence pulses, necessary to control and form the recording pulses, must follow in synch with the revolutions of the drum; for this purpose, they were read from the drum's cadence track, on which 2048 pulses had been previously written in a uniform manner around the circumference. In addition to the cadence track, two other tracks were used to obtain the synchronizing pulses. These tracks were served each by a single head, reading amplifier, pulse forming networks and delay circuits to obtain auxiliary pulses delayed with respect to the fundamental pulses. A functional diagram of the operational memory (also in drum form and designed as a circulation register) is given and interpreted. The floating head, along with the recording and reading amplifiers, are described in some detail. With a recording current of 28 ma over 3-micron thick nickel and a circumferential drum rotation speed of 23 milliseconds, the output voltage of the read-out signal was 3 millivolts with a recording density of 4.5 pulses/millimeter. Indirect experimentation has shown that a head of this type can provide recording densities of better than 10 pulses/millimeter. Orig. art. has: 4 figures.

Card 2/3

ACCESSION NR: AT4026350

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: CP

NO SOV REF: 000

OTHER:000

Card

3/3

BABIY, Viktor

Mysterious armored train. Voen. znan. 40 no.2:9-10 F '64.

(MIRA 17:2)

BABIY, V.N.

Understanding of contradictions by pupils in the second to seventh
grades [with summary in English]. Vop.psikhol. 4 no.3:99-105
My-Je '58 (MIRA 11:8)

1. Kafedra psikhologii Leningradskogo gosudarstvennogo pedagogicheskogo
instituta im. A.I. Gertsena.
(COMPREHENSION)

L 14475-66

ACC NR: AR5021791

SOURCE CODE: UR/0299/65/000/015/M030/M030

AUTHOR: Babiy, V P.

ORG: none

TITLE: Time needed for the development of an osseous autotransplant

SOURCE: Ref. zh. Biologiya, Abs. 15M174

REF SOURCE: Sb. Lecheniye travm i ikh posledstviy. Kiyev. Zdorov'ye, 1964, 78-80

TOPIC TAGS: biological transplant, bone

TRANSLATION: Rabbits were subjected to two series of tests in order to determine the optimal time needed for developing a free bone transplant. In the first series a lamellate transplant was obtained from the upper third of the tibia by cutting through all its layers and leaving the lamella in its place. In the second series 6 - 8 punctures were made with a sharp instrument through the spongy matter in the lower metaphysis of the right femur. In rabbits used in the first series of tests, the transplant underwent sufficient resorption and vascularization within 8 to 10 days, and in 12 to 15 days the amount of osteoblasts decreased and the calcification of the regenerative tissues around the transplant started. Analogous data was obtained in

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UDC: 577.99

L 14475-66

ACC NR: AR5021791

the second series of tests. Thus, the best length of time for developing a
transplant is 8 to 10 days. B. Kozhevnikov.

SUB CODE: 06

CC
Card 2/2

BABIY, V.S.

Using poisonous chemicals with fertilizers. Zashch. rast. ot
vred. i bol. 9 no.5:20 '64. (MIRA 17:6)

1. Moldavskiy filial Vsesoyuznogo instituta zashchity rasteniy.

BAKII, V.S., nauchnyy sotrudnik; KRASNOVSKAYA, N.I., nauchnyy sotrudnik

Applying ~~per~~captohes with foliar feeding. Zashch. rast. ot
vred. i bol. 6 no.8:27-28 Ag '61. (MIRA 15:12)

1. Moldavskaya stantsiya Vsesoyuznogo instituta zashchity
rasteniy, g. Kishinev.

(~~Mar~~captohes)

(Apple—Diseases and ~~pests~~)

L 43092-66 EWP(k)/EWT(m)/T/EWP(v)/JFI 112(c) JP 100

ACC NR: AR6014385 (A,N)

SOURCE CODE: UR/0137/65/000/011/1058/1058

AUTHORS: Babiy, V. S.; Kalmutskiy, V. S.

TITLE: Effect of mechanical deformation on the electrode potential of steel

SOURCE: Ref. zh. Metallurgiya, Abs. 111406

REF SOURCE: Sb. Materialy dokl. 1-y Nauchno-tekhn. konferentsii Kishinevsk. politekhn. in-ta. Kishinev, 1965, 85-86

TOPIC TAGS: material deformation, alloy steel, electrode potential / St. 3 alloy steel

ABSTRACT: Structural changes of the surface resulting from mechanical treatment are reflected in the magnitude of the electrode potential. The electrode potentials of a surface under stress are more negative than stationary potentials of a steel annealed in vacuum. Thus, for steel St. 3 φ_{stat} in chloride electrolyte is -475 to -470 mv (normal calomel electrode 5 (NKE)) and -436 to -445 mv (NKE). According to x-ray structural data, the surface stresses decrease during anodic dissolution. This is reflected in the magnitude of the stationary potentials, determined after anodic etching. After anodic dissolution φ_{stat} for steels

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UDC: 669.14.018.26:539.37

L 43092-66

ACC NR: AR6014385

annealed in vacuum in 48% H_3PO_4 solution is approximately -490 to -520 mv (NKE) and for the deformed steel -450 to -470 mv (NKE) respectively. Comparison of anodic polarization data indicates that the magnitude of anodic polarization of deformed steels is larger than that of annealed steels. V. Olenicheva [Translation of abstract]

SUB CODE: 11

Card 2/2 *gd*

BABIY, V.Z., brigadir puti (stantsiya Syanki, L'vovskaya doroga)

Cross bonds in frogs. Put' i put. khoz. no.6:29 Je '59.
(MIRA 12:10)

(Railroads--Switches)

STARINSKIY, I.A.; BABIY, V.Z.

How to plan current maintenance operations. Reviewed by
I.A.Starinskiy, V.Z.Babiy. Put' i put.khoz. no.10:32
0 '59. (MIRA 13:2)

1. Starshiy dorozhnyy master, stantsiya Armavir, Severo-Kavkazskoy dorogi (for Starinskiy). 2. Brigadir puti, stantsiya Syanki, L'vovskoy dorogi (for Babiy).
(Railroads--Maintenance and repair)

BABIY, Ye.; ZYUBIN, S.; ANTYUKHOV, A.; KAMCHATOV, K.; DOLGOVA, I.; KASTOR-
NOV, M., mekhanik; GOL'TSEV, M.; KUZ'MIN, I., mekhanik; PAVLOV, N.,
mashinist kombayna; SMETANKIN, P., mashinist kombayna; SAFONOV, M.,
mashinist kombayna; KOZLOV, N., brigadir gornorabochikh; BUYAK, I.,
brigadir gornorabochikh; SOLDATOV, N., brigadir gornorabochikh.

Not into the records but into practice. Sov.shakht. 12 no.12:17-
18 D '63. (MIRA 17:3)

1. Shakhtoupravleniye No.3-25 tresta Donskoyugol' kombinata Tula-
ugol'. 2. Nachal'nik shakhtoupravleniya No.3-25 tresta Donskoyugol'
kombinata Tulaugol' (for Babiy). 3. Sekretar'partorganizatsii shakh-
toupravleniya No.3-25 tresta Donskoyugol' kombinata Tulaugol' (for
Zyubin). 4. Glavnyy inzh. shakhtoupravleniya No.3-25 tresta Donskoy-
ugol' kombinata Tulaugol' (for Kamchatov). 5. Sekretar' komсомol'-
skoy organizatsii shakhtoupravleniya No.3-25 tresta Donskoyugol'
kombinata Tulaugol' (for Dolgova).

BAKAY, Ye. S., perev. izh.

Experience in operating the Pech-51k mechanized group of computers.
Ugol' 40 no. 5:63-64, My '65. (MIRA 18:66)

1. Nachal'nik shakhty No. 3 "Kamenetskaya" Kuzbasskaya Oblast'.

GRINBERG, Ye.A., dotsent; BABIY, Z.N.; LADUBA, T.L.; KHRAPACH, D.B.

Procurement of preserved blood in accommodations without special equipment. Vrach. delo no.4:72-77 Ap'63. (MIRA 16:7)

1. Kiyevskiy nauchno-issledovatel'skiy institut perelivaniya krovi i neotlozhnoy khirurgii (nauchnyy rukovoditel' instituta-prof. A.G.Karavanov).

(BLOOD—COLLECTION AND PRESERVATION)

BABIY. Z.N.; RULENKO, I.S.

Study of the growth of anaerobic bacteria on semiliquid agar with preserved blood. Gemat. i perel. krovi 1:129-131 '65.

(MIRA 18:10)

1. Kiyevskiy institut perelivaniya krovi i Kiyevskiy institut epidemiologii i mikrobiologii.

BABIYAN, N.A.

Derivatives of Hexachloro-3-hexene. A.H.Akopyan, G.M.Mkryan, N.A. Babiyan, and O.B.Garibdzhanyan (Chem.Inst.Armenian Acad.Sci.SSR). Bull.Armenian Branch Acad. Sci.USSR, 1942, No.12 (15/16), 69-94 (in Russian with English summary).

Hexachloro-3-hexene (42 g.) in 200 cc. 96% EtOH was treated with stirring with 1 g. Zn dust added in small portions, with cooling to $30-20^{\circ}$, in the course of 2-3 hours. The soln. was dild. with H₂O and filtered and the org. layer distd. to yield 3,4-dichloro-1,5,5-hexatriene; b₁₂ $53-3.5^{\circ}$, b₁₂ $52-4^{\circ}$, d. -11° to -12° (51%). On standing for 1 hr. at room temp. the product polymerizes to a rubber, which is sol. in CHCl₃ and CCl₄. On aging the polymer loses its flexibility and soly. Chlorination yields the original substance, while bromination in CCl₄ yields 1,2,5,6-tetrabromo-3,4-dichloro-3-hexene, n. $93-6^{\circ}$ (from CCl₄)

G.M.Kosolapoff

BABYAN, N. A.

Sono tetraalkyldiaminoisopropyl esters of *p*-alkoxybenzoic acid. A. L. Mndzhoyan and N. A. Babyan. *Izv. Akad. Nauk Armian S.S.R. 7, Ser. Fiz.-Mat. Estimen.* 1954, No. 63-70 (1954) (in Russian, Armenian summary, 71-2).—Eight new α,γ -bis(dialkylamino)isopropyl esters of *p*-alkoxybenzoic acid having the structure $p-R'O_2C_6H_4CO_2CH(CR_2NR_2)CH_2NR_2$, where R = Me or Et and R' = Me, Et, Pr, or Bu, were prepd. by the action of the chloride of the acid with α,γ -dichloroisopropanol and the subsequent amination of the chloro esters by secondary amines in C.H.₄. Four α,γ -dichloroisopropyl esters of *p*-methoxy-, *p*-ethoxy-, *p*-propoxy-, and *p*-butoxybenzoic acids were also isolated. The phys. and pharmacol. properties of these compds. were studied and exptl. results show that some of these esters are strong local anesthetics. Microbiol. expts. show compatible action of the synthesized compds. and sulfa drugs.

Evgenii Merdinger ①

Chem.-Int., AS. Arm. SSR

BABIYAN, N. A.

USSR.

Synthesis of derivatives of dibasic carboxylic acids. II. Derivatives of succinic acid. A. L. Mindzhoyan, O. I. Mindzhoyan, and N. A. Babiyon. *Doklady Akad. Nauk Armyan. S.S.R.* 18: 45-47 (1954). 48-9. Armenian summary (1954). The following derivatives are reported without description of the methods used: $Me_2NCH_2CH_2CO_2CH_2CH_2CO_2R$ (R = CH_3 , yield 1 p. mm. (20 mm) m.p. 132 salt, m.p. methoxide given: Me , 138-2, 1.0547, 1.4350, 91°, 110°. Et , 70-3, 104.5°/1.5, 1.3610, 1.4315, 109°, 70°. Pr , 84.6, 118°/2, 1.0119, 1.4351, 132°, 105°. $iso-Pr$, 77.0, 125°/30, 1.0657, 1.4334, 119°, 118°. Bu , 73.2, 127.1, 130°/30, 1.0171, 82°, 101°. $iso-Bu$, 76.8, 135°/4, 0.9909, 1.4312, 130°, 101°. $tert-Am$, 72, 141°/3, 0.9882, 1.4370, 115°, 88°. C_6H_5 , 85.6, 160°/4, 1.0342, 1.4570, 128°, 110°. Ph , 83.6, 163°/2, 1.0934, 1.4947, 115°, 138°. $Et_4NCH_2CH_2CO_2CH_2CH_2CO_2R$ (R = CH_3 , yield, b.p. mm. (20 mm) m.p. HCl salt, m.p. methoxide given: Me , 65.8, 125°/1.2, 1.0237, 1.4391, 76°, 100°. Et , 77.3, 125°, 1.5, 1.0045, 1.4380, —, 95°. Pr , 86.2, 135°/2, 0.9916, 1.4491, —, 71°. $iso-Pr$, 81.5, 113°, 0.9822, 1.4361, —, 58°. Bu , 75, 171°/10, 0.9818, 1.4490, —, 56°. $iso-Bu$, 63.8, 148°/4, 0.9790, 1.4375, —, 49°. $tert-Am$, 73.1, 151°/3, 0.9720, 1.4403, —, 45°. C_6H_5 , 79.3, 165°/0.5, 1.0131, 1.4587, 98°, 71°. Ph , 73, 195-6°/2, 1.0021, 1.4570, 141°, 136°. G. M. Kosolapoff

BA 3141 NA

U S S R .

Synthesis of derivatives of *p*-alkoxybenzoic acids. IV. Some derivatives of *n*,*n*-alkylphenols-*p*-hydroxybenzoic acids. A. L. Muzhovan, O. L. Muzhovan, and N. A. Babiyani. *Doklady Akad. Nauk Armyan. S.S.R.* 18, 105-8 (1954); Armenian summary, 105-10 (1954); cf. *C.A.* 49, 8358a. The following substances were prepd. for studies of curare activity. The descriptions of the synthesis and the biochem. results are not given. $(CH_3)_2(CO_2H, CO_2R-p)$, n and R , yield, and b.p. or m.p. (stated without indication of which is meant in each case) shown: 1, Et , 50.7%, 98-100°; 1, Me , NCH_2CH_3 , 50%, undistillable liquid (HCl salt, m. 212°), oxalate, m. 194-5°, methiodide, m. 73-3°, ethiodide, m. 132-6°; 1, Et , NCH_2CH_3 , undistillable liquid, 48% (oxalate, m. 153-9°, methiodide, m. 125-3°, ethiodide, m. 84-5°); 2, Et , 25%, 105-7°; 2, Me , NCH_2CH_3 , 60%, 81-2° (HCl salt, m. 237-8°, oxalate, m. 233-4°, methiodide, m. 247-9°, ethiodide, m. 230-1°); 2, Et , NCH_2CH_3 , 50%, 50-7° (HCl salt, m. 210-20°, oxalate, m. 177-9°, methiodide, m. 139-40°, ethiodide, m. 213-15°); 3, Et , 52.2%, 100-10°, 3, Me , NCH_2CH_3 , 50%, 9-9° (HCl salt, m. 108-71°, oxalate, m. 180-92°, methiodide, m. 217-18°, ethiodide, m. 177-82°); 3, Et , NCH_2CH_3 , 50%, 50-1° (oxalate, m. 130-41°, methiodide, m. 149-52°, ethiodide, m. 105-7°); 4, Et , 56%, 97-0°; 4, Me , NCH_2CH_3 , 45%, 58-9° (HCl salt, m. 202-3°, oxalate, m. 234-6°, methiodide, m. 230-2°, ethiodide, m. 201-6°); 4, Et , NCH_2CH_3 , 40%, 45-6° (HCl salt, m. 200-12°, oxalate, m. 234-8°, methiodide, m. 181-2°, ethiodide, m. 174-9°). G. M. Kosolapoff —

Lab. Pharmaceutical Chem., AS Arm SSR

Handwritten: Mndzhoyan, A.L.
MNDZHOYAN, A.L.; MNDZHOYAN, O.L.; BABIYAN, N.A.

Investigation on the synthesis of derived dibasic carboxylic acids.
Dokl. AN Arm. SSR 19 no.3:93-96 '54. (MLRA 8:7)

1. Deystvitel'nyy chlen Akademii nauk Armyanskoy SSR. (for Mndzhoyan, A.L.)
2. Laboratoriya farmatsevticheskoy khimii Akademii nauk Armyanskoy SSR.
(Carboxylic acid)

BABIYAN, N. H.

Call Nr: AF 1135663

AUTHOR: None given

TITLE: Syntheses of Heterocyclic Compounds (Sintezy geterotsiklicheskikh soyedineniy)

PUB. DATA: Izdatel'stvo AN Armyanskoy SSR, Yerevan, 1956, 84 pp., 2000 copies Armyanskoy

ORIG. AGENCY: Akademiya nauk/SSR. Institut tonkoy organicheskoy khimii

EDITOR: A. L. Mndzhoyan, Editor-in-Chief
Editorial Staff: Aroyan, A. A., Afrikyan, V. G.,
Babiyany, N. A., Mndzhoyan, O. L., Tatevosyan, G. T.

PURPOSE: The purpose of this book is to facilitate the work of scientists engaged in the preparation of compounds frequently used as initial substances.

COVERAGE: The Institute of Fine Organic Chemistry of the Academy of Sciences of the Armenian SSR is publishing new series of methods for the synthesis of heterocyclic compounds. Not only methods developed by the Institute, but also methods developed by other institutions will be included.

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Syntheses of Heterocyclic Compounds (Cont.)

of Fine Organic Chemistry of the Academy of Sciences of the Armenian SSR. Because of the great interest in furan derivatives as raw material for many intermediates and for products used in medicine and agriculture, this issue is devoted to the synthesis of furan derivatives exclusively. The description of "Methods" covers the literature up to 1956. The description of "Other Methods of Preparation" covers the literature up to 1954. Names of scientists concerned with the development and testing of the methods are in the abstracts of the individual methods.

Page

Synthesis of 5-benzyl-furan-2-carboxylic acid: Proposed 11
by A. L. Mndzhoyan and V. G. Afrikyan; verified by
G. T. Tatevosyan and N. M. Divanyan. The product was prepared from methyl ester of 5-benzylfuran-2-carboxylic acid and a 10% NaOH solution by heating the mixture on a water bath for 3-4 hrs. M.p. 104-105°C; yield, 84.1-89.1%. The authors state that H. J. H. Fenton and F. Robinson (1909) prepared a substance which they assumed to be 5-benzylfuran-2-carboxylic acid by condensation of 5-chloromethyl-furfural

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Syntheses of Heterocyclic Compounds (Cont.)

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with benzene followed by oxidation of the aldehyde formed. However, this product had a m.p. of 167-169°C; thus it could not be 5-benzylfuran-2-carboxylic acid. Three references, one Slavic (1953).

Synthesis of 3-(5'-benzyl-2'-furyl)-5-mercapto-1,2,4-triazole: Proposed by A. L. Mndzhoyan and V. G. Afrikyan; verified by N. A. Babiyan and A. A. Dokhikyan. The product was obtained by heating a mixture of 5-benzyl-2-furoyl-thiosemicarbazide, sodium methylate, and methyl alcohol in an autoclave at 145-150°C for 3 hrs. M.p. 232°C; yield, 83.6-87.6%. One Slavic reference (1953).

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Synthesis of 5-bromofuran-2-carboxylic acid: Proposed by A. L. Mndzhoyan and V. G. Afrikyan; verified by M. G. Grigoryan and Yu. O. Martirosyan. A mixture of furan-2-carboxylic acid, red phosphorus and chloroform is heated to boiling on a water bath, and bromine is added dropwise over a period of 5-6 hrs. The solvent is

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removed by distillation, water is added, and the mixture is heated for 3-4 hrs. After cooling and adding a 20% ammonia solution to strong alkaline reaction, BaCl_2 and bone black are added, and the mixture is heated to boiling for 30-40 min. M.p., 182-83°C; yield, 63.1-63.5%. Other methods of preparation: 5-Bromofuran-2-carboxylic acid may be obtained by bromination of ethyl ester of pyromucic acid dissolved in acetic acid, followed by hydrolysis of the obtained product by alcoholic alkali solution or by oxidation of 5-bromofurfural. The product can also be obtained by bromination of pyromucic acid with or without solvents (such as acetic acid, diethyl ether, chloroform, and carbon tetrachloride). Higher yields were obtained when the reaction was conducted in the presence of red phosphorus. Seven references, one Slavic (1946).

Synthesis of furfural diacetate: Proposed by
V. G. Afrikyan and A. A. Dokhikyan. Freshly distilled
furfural is slowly added to a mixture of acetic anhydride

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- Syntheses of Heterocyclic Compounds (Cont.)

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and conc. H_2SO_4 at $10^\circ C$. In 20-30 min., the temperature of the mixture reaches room temperature; sodium acetate is added, and the mixture is distilled in vacuo. The $140-142^\circ/20$ mm fraction is collected; yield 65-70%. Other methods of preparation: furfural diacetate can be obtained from furfural and acetic anhydride in the presence of sulfuric acid, zinc chloride, tin chloride, acetic acid, and other catalysts. Six references, none Slavic.

Synthesis of 5-diethylaminomethylfuryl-2-carbinol: Proposed by A. L. Mndzhoyan and M. T. Grigoryan; verified by N. A. Babiyan and N. M. Ogandzhanyan. Methyl ester of 5-diethylaminomethylfuran-2-carboxylic acid is added to lithium aluminum hydride. The mixture is allowed to stand overnight and the excess of lithium aluminum hydride is decomposed by addition of water. After filtration, drying, and vacuum-distillation, the $120-122^\circ/1$ mm fraction is collected. Yield, 80.2-83.5%. Three references, one Slavic (1953).

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Syntheses of Heterocyclic Compounds (Cont.)

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Synthesis of methyl ester of 5-benzylfuran-2-carboxylic acid: Proposed by A. L. Mndzhoyan, V. G. Afrikyan, and A. A. Dokhikyan; verified by G. T. Tatevosyan and N. M. Divanyan. Anhydrous aluminum chloride is slowly added to a benzene solution of methyl ester of 5-chloromethylfuran-2-carboxylic acid. The mixture is heated for 4-5 hrs., at 80-85°C, cooled, and dilute HCl is added in order to dissolve the formed $Al(OH)_3$. After removal of the solvent by distillation, the product is distilled in vacuo, and the 150-155°/1 mm fraction is collected. Yield, 62.3-63.8%. On cooling, the product crystallizes; m.p. 43-44°C. One Slavic reference (1953).

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Synthesis of methyl ester of 5-bromomethylfuran-2-carboxylic acid: Proposed by A. L. Mndzhoyan and V. G. Afrikyan; verified by G. T. Tatevosyan and S. G. Agbalyan. A rapid stream of hydrogen bromide is passed through a mixture consisting of methyl ester of furan-2-carboxylic acid, dry dichloroethane, paraformaldehyde, and zinc chloride. The reaction time is 2.0-2.5 hrs.; reaction temperature, 24-26°/2.5 mm; yield, 78.9-79.9%.

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Syntheses of Heterocyclic Compounds (Cont.)

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The crystallized product melts at 32-36°C. One Slavic reference (1953).

Synthesis of methyl ester of 5-butylmercaptomethylfuran-2-carboxylic acid: Proposed by A. L. Mndzhoyan and N. M. Divanyan; verified by O. L. Mndzhoyan and E. R. Bagdasar'yan. Toluene is added to metallic sodium and the mixture is heated with stirring until sodium is dissolved. Freshly distilled n-butylmercaptan is added dropwise, with continuous stirring, at 40-50°C., and the mixture is allowed to stand for several hours. Methyl ester of 5-chloromethylfuran-2-carboxylic acid is added dropwise to the mixture (2.0-2.5 hrs.), and the mixture is heated for 2 hrs. at 90-95°C. After removal of the solvent, the product is distilled in vacuo, and the 153-155°/4 mm fraction is collected. Yield, 89.1-92.9%. One Slavic reference (1953).

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Syntheses of Heterocyclic Compounds (Cont.)

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|--|------|
| Synthesis of methyl ester of 5-diethylaminomethylfuran-2-carboxylic acid: Proposed by A. L. Mndzhoyan, V. G. Afrikyan, and M. T. Grigoryan; verified by U. L. Mndzhoyan and O. Ye. Gasparyan. A benzene solution of diethylamine is added to a benzene solution of methyl ester of 5-chloromethylfuran-2-carboxylic acid. The mixture is heated to boiling for 4-5 hrs, cooled, and treated with a 10% HCl solution. Methyl ester of 5-diethylaminomethylfuran-2-carboxylic acid is obtained with a yield of 85.3-94.7%; b.p. 102-103°/1.5 mm. The same method may be applied to synthesize ethyl, propyl, isopropyl, butyl, and isobutyl esters of 5-dimethyl-, diethyl-, dipropyl-, and dibutylaminomethylfuran-2-carboxylic acids with similar yields. One Slavic reference (1953). | 28 |
| Synthesis of methyl ester of 5-methylfuran-2-carboxylic acid: Proposed by A. L. Mndzhoyan, V. G. Afrikyan, and M. T. Grigoryan; verified by G. T. Tatevosyan and S. G. Agbalyan. Zinc dust is added to a mixture of methyl ester of 5-chloromethylfuran-2-carboxylic acid and acetic | 30 |

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Syntheses of Heterocyclic Compounds (Cont.)

Call Nr: AF 1135663

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acid (90%) over a period of 2.0-2.5 hrs. The mixture is then heated with stirring for 20 hrs. The b.p. of the obtained product is 97-99°/12 mm; yield, 81-83%. Other methods of preparation are mentioned: 5-Methylfuran-2-carboxylic acid was also obtained by esterification of the acid prepared by oxidation of 5-methylfurfural with silver oxide. Three references, 1 Slavic (1953).

Synthesis of methyl ester of 5-propoxymethylfuran-2-carboxylic acid: Proposed by V. G. Afrikyan and G. L. Papayan; verified by O. L. Mndzhoyan and O. Ye. Gasparyan. Metallic sodium is dissolved in propyl alcohol and freshly distilled methyl ester of 5-chloromethylfuran-2-carboxylic acid is added dropwise to the solution. The mixture is heated to boiling for 8 hrs; the separated 5-propoxymethylfuran-2-carboxylic acid has a b.p. of 146-148°/5 mm; yield 76.7-78.4%. Two references, 1 Slavic (1953).

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Syntheses of Heterocyclic Compounds (Cont.)

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Synthesis of methyl ester of furan-2-carboxylic acid: 34
Proposed by V. G. Afrikyan and M. T. Grigoryan; verified
by G. T. Tatevosyan and S. G. Agbalyan. Method I. A
rapid stream of hydrogen chloride is passed through a
boiling solution of furan-2-carboxylic acid in methyl
alcohol over a period of 2.5-3.0 hrs. The obtained methyl
ester of furan-2-carboxylic acid has a b.p. of 176-177°/680 mm;
yield, 79.3-81.6%. Method II. Conc. sulfuric acid is
added to a mixture of furan-2-carboxylic acid in methyl
alcohol. The mixture is heated to boiling for 4 hrs. The
yield of methyl ester of furan-2-carboxylic acid
obtained by Method II is lower than that obtained by method I
(79.3-81.6% and 75.4-76.2% resp.). Other methods of prepa-
ration: Methyl ester of furan-2-carboxylic acid may also
be obtained by esterification of the acid; methylation of
the acid with dimethyl sulfate in alkaline medium; reaction
of furoyl chloride with magnesium methyle in methyl
alcohol. Four references, none Slavic.

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Syntheses of Heterocyclic Compounds (Cont.)

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Synthesis of methyl ester of 5-chloromethylfuran-2-carboxylic acid: Proposed by A. L. Mndzhoyan and M. T. Grigoryan; verified by G. T. Tatevosyan and S. G. Agbalyan. A rapid stream of hydrogen chloride is passed through a mixture of methyl ester of furan-2-carboxylic acid, dichloroethane, paraformaldehyde, and zinc chloride. Reaction time, 2 hrs.; reaction temperature, 24-26°C. The obtained methyl ester of 5-chloromethylfuran-2-carboxylic acid has a m.p. of 34-36°C; yield; 80.7-81.9%. Other methods of preparation: chloromethylation of methyl ester of pyromucic acid in dichloromethane with paraformaldehyde and hydrogen chloride in the presence of zinc chloride; chloroform may be used instead of dichloromethane; phosphoric acid, aluminum chloride or a mixture of tin chloride hexahydrate with sodium sulfate may be used instead of zinc chloride. Ethyl, propyl, isopropyl,

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Syntheses of Heterocyclic Compounds (Cont.)

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butyl, and isobutyl esters of 5-chloromethylfuran-2-carboxylic acid were obtained by the same method with yields of 80-90%. Four references, 1 Slavic (1953).

Synthesis of 2-methylfuran (sylvan): Proposed by 39
A. L. Mndzhoyan and G. T. Tatevosyan; verified by
V. G. Afrikyan and G. L. Papayan. 5-Methylfuran-2-
carboxylic acid is decomposed by heating at 170-175°C.
The sylvan formed has a b.p. of 61°/680 mm; yield, 80.1-84.8%.
Other methods of preparation: Dry distillation
of wood; catalytic hydrogenation of furfural over catalysts
(Cu or Cu-Cr) at temperatures >200°C, a mixture of furfural,
furan, and sylvan is obtained by passing furfuryl alcohol
over aluminum oxide at 390°C or heating it with a nickel
catalyst at 150°C. Six references, 1 Slavic (1939).

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Synthesis of 5-methylfuran-2-carboxylic acid: Proposed by A. L. Mndzhoyan and M. T. Grigoryan; verified by G. T. Tatevosyan and S. G. Agbalyan. A mixture of methyl ester of 5-methylfuran-2-carboxylic acid and a 20% solution of sodium hydroxide is heated for 2 hrs. The obtained 5-methylfuran-2-carboxylic acid has a m.p. of 108-109°C; yield, 83.3-87.3%. Other methods of preparation: Oxidation of 5-methylfurfural with silver oxide or alkali metal hypobromites; oxidation of 5-methyl-2-acetylfuran with potassium hypochlorite (low yield); hydrolysis of 5-methylfuran-2-cyanide. Five references, 1 Slavic (1953)

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Synthesis of propylfurylcarbinol: Proposed by O. L. Mndzhoyan and N. A. Babiyan; verified by G. T. Tatevosyan and N. M. Divanyan. Magnesium shavings, abs. ether and an iodine crystal are placed in a flask; an ether solution of propyl bromide is added dropwise, and the mixture is heated to boiling until the magnesium is dissolved. The mixture is cooled, and an ether solution of furfural is added. The mixture is heated for 1-1.5 hrs., and after cooling an aqueous solution of ammonium chloride is added. The obtained propylfurylcarbinol has a b.p. of 66-68°C/1.5 mm; yield, 64.1-67.9%. Two references, 1 Slavic (1956)

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Syntheses of Heterocyclic Compounds (Cont.)

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Synthesis of 5-propoxymethylfuran-2-carboxylic acid: Proposed by V. G. Afrikyan and G. L. Papayan; verified by O. L. Mndzhoyan and O. Ye. Gasparyan. Ground sodium hydroxide is placed in alcohol (96%); and methyl ester of 5-propoxymethylfuran-2-carboxylic acid is added. The obtained 5-propoxymethylfuran-2-carboxylic acid has a m.p. of 43-44°C.; yield, 72.4-76%. One Slavic reference (1953)

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Synthesis of phenylfurylcarbinol: Proposed by O. L. Mndzhoyan and E. R. Bagdasaryan; verified by G. T. Tatevosyan and N. M. Divanyan. Magnesium shavings, ether, and an iodine crystal are placed in a flask and an ether solution of bromobenzene is added. The mixture is heated to complete dissolution of magnesium, cooled, and an ether solution of furfural is slowly added. The mixture

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Syntheses of Heterocyclic Compounds (Cont.)

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is then heated to boiling for 2.5-3.0 hrs., cooled and the reaction product decomposed with an aqueous solution of ammonium chloride. Phenylfurylcarbinol is obtained with a yield of 59.4-62.1%; b.p., 125-126°/0.5 mm. Three references, 1 Slavic (1956)

Synthesis of furan: Verified by G. T. Tatevosyan and S. P. Elmekdzhyan. An illustration and description of an apparatus used for the synthesis are given. Furan-2-carboxylic acid is decarboxylized by heating to 200-205°C. Yield of furan, 74.7-80.2%; b.p., 31-32°/760 mm. Other methods of preparation: Furan can be obtained by removing the carbonyl group from furfural either by adding furfural to a molten mixture of KOH and NaOH or by passing its vapors over hot soda lime in the presence of catalysts (such as zinc and copper chromites and molybdates) at 300-400°C; nickel, iron, platinum, and palladium catalysts are also mentioned. A laboratory method for preparation of furan is based on decarboxylation of furan-2-carboxylic acid by

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dry distillation of the barium salt or by heating barium salt with soda lime. Furan-2-carboxylic acid can be decarboxylated by heating it in quinoline in the presence of cupric oxide. Ten references, two Slavic (1949-53)

Synthesis of furan-2-carboxylic acid and of furfuryl alcohol: Verified by V. G. Afrikyan and M. T. Grigoryan. A 30% solution of sodium hydroxide is slowly added to furfural (at 15°C). Water is then added to the mixture to dissolve the precipitated sodium salt of furan-2-carboxylic acid. Furfuryl alcohol is extracted from the solution with ether; yield 63.5-64.5%; b.p. 75-77°/15 mm. The aqueous solution containing the sodium salt of furan-2-carboxylic acid is acidified with dilute H₂SO₄ or conc. HCl, and furan-2-carboxylic acid is precipitated. Yield,

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Syntheses of Heterocyclic Compounds (Cont.)

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78.4-80.1%; m.p. 132-133°C. Other methods of preparation: Furan-2-carboxylic acid is obtained by oxidation of furfural with KMnO_4 and alkali metal dichromates or with atmospheric oxygen in the presence of catalysts containing silver oxide. Sodium hypochlorite was also used to oxidize furfural and 2-propionylfuran. Furan-2-carboxylic acid is obtained from furfural along with furfuryl alcohol by the reaction with sodium amide and conc. solutions of alkalies. Furfuryl alcohol may be obtained by reduction of furfural with sodium amalgam. Catalytic reduction of furfural in liquid phase under pressure at 130-160°C in the presence of copper and copper-chrome catalysts containing alkaline earth oxides is widely used. Furfuryl alcohol was obtained by reduction of furan-2-carboxylic acid with lithium aluminum hydride; yield, 85%. Furfuryl alcohol and furan-2-carboxylic acid are obtained by dismutation of furfural with sodium amide and alkalies. Thirteen references, two Slavic (1939-49)

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Syntheses of Heterocyclic Compounds (Cont.)

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Synthesis of 3-(2'-furyl)-5-mercapto-1,2,4-triazole: Proposed by A. L. Mndzhoyan and V. G. Afrikyan; verified by O. L. Mndzhoyan and N. A. Babiyan. A mixture of sodium methylete, furoyl-2-thiosemicarbazide and abs. ethyl alcohol is heated in an autoclave at 145-150°C for 3 hrs. After filtration, the residue is dissolved in water, and the solution acidified with 18-30% HCl. The product is purified by dissolution in a solution of sodium carbonate and by precipitation with 18-20% HCl. The yield of 3-(2'-furyl)-5-mercapto-1,2,4-triazole is 83.8-89.8%; m.p. 272-273°C. One Slavic reference (1953)

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Synthesis of furoyl-2-thiosemicarbazide: Proposed by A. L. Mndzhoyan and V. G. Afrikyan; verified by N. A. Babiyan and S. S. Manucharyan. A mixture of thiosemicarbazide hydrochloride with pyridine is heated to boiling for 20-25 min., cooled to -7, -5°C, and 2-furoyl chloride is added dropwise to the mixture. The crude

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Syntheses of Heterocyclic Compounds (Cont.)

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product is purified by recrystallization from glacial acetic acid. Yield, 50-55.4%; m.p. 203°C. One Slavic reference (1953).

Synthesis of furfural: Verified by G. T. Tatevosyan and N. M. Divanyan. An illustration and a description of the apparatus used for the experiments are given. A mixture of ground corn cob, sodium chloride, and a 10% solution of H_2SO_4 is heated in the apparatus. The distilled furfural is collected in a receiver containing chloroform. Furfural is separated from the chloroform and distilled in vacuo; b.p., 70-72°/25 mm. Other methods of preparation: Treatment of xylose and other pentoses with HCl and HBr. Corn cobs, some wood varieties, husk and chaff of oats, rice, etc. are used as raw material. Hydrolysis of the pentosans is effected by heating of the plant material with HCl or H_2SO_4 . Three references, none Slavic.

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Synthesis of 5-benzyl-2-furoyl chloride: Proposed by V. G. Afrikyan and A. A. Dokhikyan; verified by G. T. Tatevosyan and N. M. Divanyan. A benzene solution of thionyl chloride is added to a benzene solution of 5-benzyl-furan-2-carboxylic acid. The mixture is heated to boiling for 4 hrs. 5-benzyl-2-furoyl chloride is obtained with a yield of 80.9-86.3%, b.p. 153-155°/mm. One Slavic reference (1953)

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Synthesis of 5-methyl-2-furoyl chloride: Proposed by A. L. Mndzhoyan; V. G. Afrikyan and M. T. Grigoryan; verified by G. T. Tatevosyan and S. G. Agbalyan. A benzene solution of thionyl chloride is added to a benzene solution of 5-methyl-furan-2-carboxylic acid. The mixture is heated to boiling for 4-5 hrs. The obtained 5-methyl-2-furoyl chloride has a b.p. of 91-92°/35 mm; yield, 87.5-92.3%. Other methods of preparation: Reaction of

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5-methyl-furan-2-carboxylic acid with PCl_3 or PCl_5 . Two references, none Slavic.

Synthesis of 2-furoyl chloride: Proposed by A. L. Mndzhoyan; 68 verified by V. G. Afrikyan and M. T. Grigoryan. A benzene solution of thionyl chloride is added to furan-2-carboxylic acid, and the mixture is heated to boiling for 10-12 hrs. The yield of 2-furoyl chloride is 91.1-92.0%; b.p. 89-90°/32 mm in vacuo. Other methods of preparation: 2-furoyl chloride was also obtained by heating furan-2-carboxylic acid with PCl_5 to 160°C without a solvent, but a lower yield was obtained. Chloroform was used as solvent. A patent was issued on preparation of 2-furoyl chloride by the reaction of pyromucic acid with excess of phosgene under pressure at temperatures up to 100°C. The reaction of a benzene solution of furan-2-carboxylic acid with excess of thionyl chloride is also mentioned. Five references, 1 Slavic (1946).

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. Syntheses of Heterocyclic Compounds (Cont.)

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Synthesis of furfuryl chloride: Proposed by G. T. Tatevosyan and S. P. Ekmekdzhyan. Pyridine and ether are added to furfuryl alcohol. After cooling the mixture to -8° , -10°C , an ether solution of thionyl chloride is added. The temperature of the reaction mixture should not exceed $2-3^{\circ}\text{C}$. The product is extracted with ether. Furfuryl chloride is obtained with a yield of 39.4-41%; b.p. $49.1-49.4^{\circ}/26\text{ mm}$. The product cannot be stored even in sealed flasks; it must be used immediately. Other methods of preparation: The ether solution of furfuryl chloride can be prepared by the reaction of thionyl chloride with a cooled ether solution of furfuryl alcohol. The obtained solution contains about 10% furfuryl chloride. Hydrogen chloride in the presence of calcium carbide (dehydrating agent) was used instead of thionyl chloride. The amount of furfuryl in the obtained solution did not exceed 5%. The

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. Syntheses of Heterocyclic Compounds (Cont.)

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use of chloroform as a solvent instead of ether was proposed. However, furfuryl chloride in pure state cannot be separated from solutions obtained by these methods. Three references, none Slavic.

Synthesis of β -chloroethyl ester of furan-2-carboxylic acid: 74
Proposed by A. L. Mndzhoyan and M. T. Grigoryan; verified by O. L. Mndzhoyan and E. R. Bagdasaryan. A mixture of furan-2-carboxylic acid and ethylene chlorohydrin is heated to boiling, and a rapid stream of hydrogen chloride is passed into the boiling solution for 5-6 hrs. The mixture is then cooled to room temperature and transferred to a flask containing water. The β -chloroethyl ester of furan-2-carboxylic acid is distilled in vacuo at 126-128°/10 mm; yield, 71.9-72.7%. One Slavic reference (1953).

β -Chloroethyl ester of 5-chloromethylfuran-2-carboxylic acid: Proposed by A. L. Mndzhoyan, V. G. Afrikyan, and M. T. Grigoryan; verified by O. L. Mndzhoyan and E. R. Bagdasaryan. A rapid stream of hydrogen chloride is passed into a mixture of β -chloroethyl ester of

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Syntheses of Heterocyclic Compounds (Cont.)

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furan-2-carboxylic acid, paraformaldehyde, chloroform, and anhydrous zinc chloride. The reaction temperature should not exceed 24-26°C; reaction time, 2.0-2.5 hrs. The yield of the obtained product is 78.9-79.8%; b.p. 145-146°/2 mm. One Slavic reference (1953).

Synthesis of ethyl ester of furoyl-2-acetic acid: Verified by A. A. Aroyan and G. L. Papayan. Ethyl ester of furan-2-carboxylic acid is heated to 75-80°C. Sodium wire is added to it and ethyl acetate is gradually added to the mixture. After the dissolution of sodium, the mixture is heated to 90-95°C, and sodium wire and ethyl acetate are again added. The mixture is solidified in about 20-30 min., after which it is dissolved in benzene. The addition of sodium wire and ethyl acetate followed by the addition of benzene (as above) is repeated six times. Reaction time, 10-12 hrs. The mixture is heated on a water

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Syntheses of Heterocyclic Compounds (Cont.)

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bath for 8-12 hrs. at 90-95°C. The content of the flask is cooled and decomposed with ice water. Then the reaction mixture is added to dilute HCl, the benzene layer is separated, and the water layer is extracted with ether (three times). The ether solutions are added to the benzene solution, dried, the solvent removed, and the residue distilled in vacuo. The 119-125°/2 mm fraction is redistilled. The product obtained has a b.p. of 123-124°/2 mm; yield, 77.6-83.8%. Other methods of preparation: The ethyl ester of furoyl-2-acetic acid may be obtained by condensation of ethyl acetate with methyl ester of furan-2-carboxylic acid in the presence of sodium methylate; yield, 68.2%. Ethyl furoyl-2-acetate may be obtained by heating ethyl tert-butyl furoyl malonate with p-toluenesulfonic acid; yield 70%. Four references, none Slavic.

AVAILABLE: Library of Congress

Card 25/25

MNDZHOYAN, A.L.; GRIGORYAN, M.T.; BABIYAN, N.A.; OGANDZHANYAN, N.M.

5-diethylaminomethylfuryl-2-carbinol. Sint.geterotsikl.soed.
no.1:20-21 '56. (MIRA 10:11)

(Forfuryl alcohol)

MNDZHOYAN, O.L.; BABIYAN, N.A.; TATEVOSYAN, G.T.; DIVANYAN, N.M.

Propylfurylcarbinol. Sint.geterotsikl.soed. no.1:44-46 '56.

(MIRA 10:11)

(Furfuryl alcohol)

BABIAN

MNDZHOYAN, A.L.; AFRIKYAN, V.G.; MNDZHOYAN, O.L.; BABIYAN, N.A.

3-(2'-furyl)-5-mercaptoptriazole-1,2,4. Sint.geterotsikl.sood.
no.1:59-60 '56. (MIRA 10:11)

(Triazole)

MNDZHOYAN, A.L.; AFRIKYAN, V.G.; BABIYAN, N.A.; MANUCHARYAN, S.S.

Furoyl-2-thiosemicarbazide. Sint.geterosikl.soed. no.1:60-62 '56.
(MIRA 10:11)

(Semicarbazide)

MNDZHOYAN, O.L.; BABIYAN, N.A.

Furanacrolein. Sint. geterotsikl. soed.no. 2:57-60 '57.

(MIRA 11:7)

(Furanacrolein)

MEDZHOYAN, O.L.; BABIYAN, N.A.

Furfuryldiethylamine. Sint. geterotsikl. soed. no. 2:74-76 '57.
(MIRA 11:7)

(Furfurylamine)

MNDZHOYAN, A.L.; BABIYAN, N.A.

Investigations of amines and their derivatives. Report No.3;
Synthesis of methyl esters of some alkyl in-alkoxybenzylcarbamic
acids. Izv.AN Arm.SSR.Khim.nauki 11 no.5:351-355 '58.

(MIRA 12:1)

1. Institut tonkoy organicheskoy khimii AN ArmSSR.
(Carbamic acid)

MNDZHOYAN, A.L., akademik; MNDZHOYAN, O.L.; BABIYAN, N.A.

Investigations in the field of derivatives of dibasic carboxylic acids.
Report No. 19. Dokl. AN Arm. SSR 27 no. 4: 239-242 '58.

(MIRA 12:1)

1. AN Armyanskoy SSR (for Mndzhoyan). 2. Institut tonkoy organicheskoy
khimii AN Armyanskoy SSR.
(Succinic acid)

MNDZHOYAN, A.L.; MNDZHOYAN, O.L.; BARIYAN, N.A.

3,4-Furandicarboxylic acid. Sint. geterotsikl. soed. no.3:86-91 '59.
(MIRA 13:11)

(Furandicarboxilic acid)

AFRIKYAN, V.G.; BABIYAN, N.A.

History of the development of fine organic chemistry in Armenia.
Iz ist.est.i tekhn. 2:121 '62. (MIRA 18:4)

MNDZHOYAN, A.L.; BABIYAN, N.A.; GAMBURYAN, A.A.

Derivatives of dicarboxylic acids. Report No.25:

Dialkylaminoethyl esters of dialkylsuccinamic acids.

Izv.AN Arm. SSR. Khim.nauki 15 no.4:363-369 '62.

(MIRA 15:11)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy
SSR.

(Succinamic acid)

MNDZHOYAN, A.L.; BABIYAN, N.A.; AKOPYAN, N.Ye.

Derivatives of furan. Report No.28: N-substituted
2-furylsuccinimides. Izv.AN Arm.SSR. Khim.nauki 16 no.4:385-390
'63. (MIRA 16:9)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.

BABINYAN, H.A.

Sixtieth birthday and thirty five years of scientific activity
of Armenak Levonovich Mndzhosian. Zhur. ob. khim. 34 no.12:
559-3861 D '64 (MIRA 18:1)

1. Institut tonkoy organicheskoy khimii AN ArmSSR.

MNDZHOYAN, A.L.; MEDNIKYAN, G.A.; BABIYAN, N.A.; GAMBURYAN, A.A.;
SHAKARYAN, Zh.A.

Study in the field of dibasic carboxylic acids. Part 27:
Dialkylaminoethyl esters of alkylthiosuccinic acids and their
curare-like activity. Izv. AN Arm.SSR. Khim. nauki 18 no.2:
186-192 '65. (MIRA 18:11)

1. Institut tonkoy organicheskoy khimii AN ArmSSR. Submitted
April 9, 1964.

BABIYAN, S. M.

Recurrence of intraspinal archnoid endotheliomas. Vop.neirokhir.
18 no.6:54-56 N-D '54 (MIRA 8:4)

1. Iz kliniki nervnykh bolezney i neyrokhiurgii Rostovskogo meditsinskogo instituta.

(SPINE, neoplasms,
arachnoid endothelioma, recur. intraspinal)

BABIYAN, S.M.

Significance of Babinski's tests in asynergy. Zhur. nevr. i psikh.
59 no.1:26-27 '59. (MIRA 12:3)

1. Otdeleniye nervnykh bolezney (zav. - prof. P.I. Emdin) Rostov-
skoy oblastnoy bol'nitsy.

(MOVEMENT DISORDERS, physiol.

asynergy, Babinski's reflex (Rus))

(REFLEX, BABINSKI, in var. dis.

asynergy (Rus))

BABIYAN, S.M.

Problem of pycno-epilepsy. Zhur.nevr.i psikh. 60 no.9:1111-1114
'60. (MIRA 14:1)

1. Otdeleniye nervnykh bolezney (zav. - prof. P.I.Endin [deceased])
Rostovskoy-na-Donu oblastnoy bol'nitsy.
(PYCNOLEPSY)

BABIYAN, S.M.

Dynamics of the changes in the electroencephalogram during the formation of conditioned reflexes in man. Biul. eksp.biol.i med. 50 no.9:11-16 S '60. (MIRA 13:11)

1. Iz kafedry fiziologii cheloveka i zhivotnykh (zav. - prof. A.B. Kogan) Rostovskogo gosudarstvennogo universiteta.
(ELECTROENCEPHALOGRAPHY) (CONDITIONED RESPONSE)

BABY = 12.1.
M
22

An Attempt to Coat Glass and China Goods with Nickel or Copper. P. L. Volodin and E. I. Babiev (*Keramika i Steklo (Ceramics and Glass), 1933, (2), 21-24.*—[In Russian.]—A description of the technique used in a Russian factory.—N. A.

ASM-35A METALLURGICAL LITERATURE CLASSIFICATION
INDEX

1. BABITSKIY, G. M., Eng.
2. UESR (600)
4. Lumbering
7. Over-all mechanization of logging at the Dubovitskiy lumber camp. Mekh. trud. rab. 6 no. 11 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

ZAVODOVSKIY, A.M., kand.tekhn.nauk; BABIYENKO, Kh.L., inzh.

Methods for designing bladings for steam and gas turbines. Teploenergetika 6 no.2:23-28 F '59. (MIRA 12:3)

1. Tsentral'nyy kotloturbinnyy institut.
(Turbines)

14(1)

SOV/66-59-4-12/28

AUTHOR: Babiyets, D.

TITLE: Reduction of Shrinkage in Storing Frozen Meat

PERIODICAL: Kholodil'naya tekhnika, 1959, Nr 4, pp 49-50 (USSR)

ABSTRACT: Storage of frozen meat involves shrinkage up to 1.44% per annum, in accordance with the table shown. The author claims that this shrinkage can be reduced 1.5 to 2.5 times in following the method of storing frozen meat, as employed by the refrigeration warehouse in Kiev. This method consists in covering stacks of frozen meat with a thin water absorbing cloth, after which water is sprayed over it, forming an ice coating which can be brought up to 5 mm for storage of long duration. Frozen meat is stored at -18°C at a humidity content of the air of 96-98%. There is one table.

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1043, 1136, 1273

S/078/60/005/008/022/031/XX
B023/B066

AUTHORS: Zvorykin, A. Ya., Perel'man, F. M., ~~Babiyevskaya~~, I. Z.,
Fedotova, T. N.

TITLE: Calcium and Iron Germanates

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 8,
pp. 1717-1724

TEXT: The authors investigated systems of sodium germanate and calcium nitrate or iron nitrate in aqueous solutions with different ratios of the components. The formation of calcium metagermanate, $\text{CaO} \cdot \text{GeO}_2 \cdot n\text{H}_2\text{O}$, and three iron germanates, $\text{Fe}_2\text{O}_3 \cdot \text{GeO}_2 \cdot n\text{H}_2\text{O}$, $\text{Fe}_2\text{O}_3 \cdot 2\text{GeO}_2 \cdot n\text{H}_2\text{O}$, and $\text{Fe}_2\text{O}_3 \cdot 3\text{GeO}_2 \cdot n\text{H}_2\text{O}$, was detected by Schreinemakers' method. Thermograms and X-ray diffraction patterns of the compounds mentioned above disclosed characteristic peculiarities and confirmed the chemical homogeneity of the resulting compounds. It was further found that the germanate $\text{Fe}_2\text{O}_3 \cdot \text{GeO}_2 \cdot n\text{H}_2\text{O}$ may be obtained with 15 and 2.5 molecules of hydration water, and that the

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Calcium and Iron Germanates

86489

S/078/60/005/008/022/031/XX
B023/B066

germanate $\text{Fe}_2\text{O}_3 \cdot 2\text{GeO}_2 \cdot n\text{H}_2\text{O}$ still contains two H_2O molecules after drying at 120°C . All iron germanates were subjected to X-ray phase analysis at the laboratory of V. G. Kuznetsov. Table 1 shows the composition of the liquid phases and of the "residues" in the system $\text{Na}_2\text{GeO}_3\text{-Ca}(\text{NO}_3)_2\text{-H}_2\text{O}$, and Table 2 dto. in the system $\text{Na}_2\text{GeO}_3\text{-Fe}(\text{NO}_3)_3\text{-H}_2\text{O}$. Fig. 1 illustrates the composition of the solid phases in the system $\text{Na}_2\text{GeO}_3\text{-Ca}(\text{NO}_3)_2\text{-H}_2\text{O}$, and Fig. 2 dto. in the system $\text{Na}_2\text{GeO}_3\text{-Fe}(\text{NO}_3)_3\text{-H}_2\text{O}$. V. F. Zhuravlev is mentioned. There are 7 figures, 2 tables, and 10 references: 4 Soviet, 4 German, and 2 US.

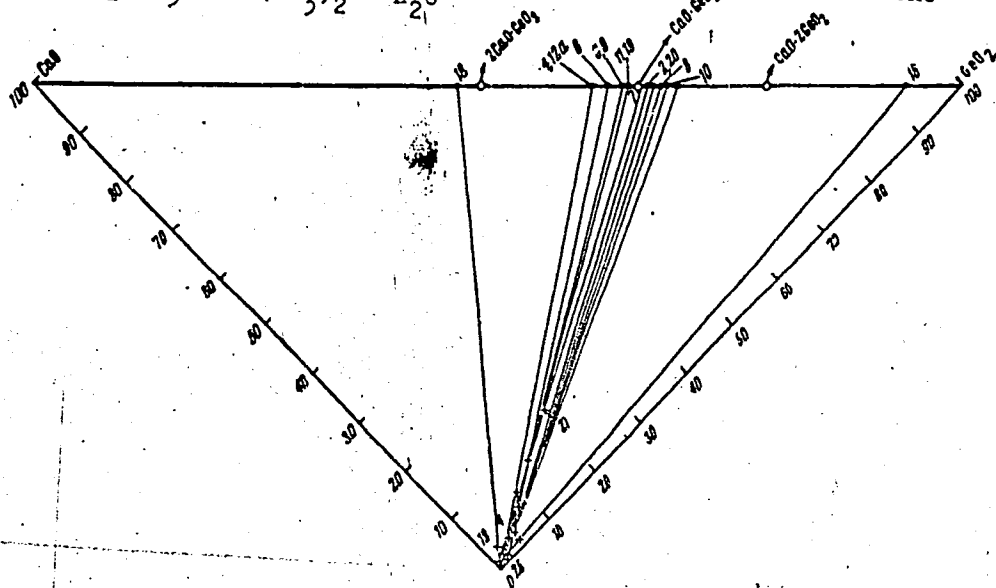
ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR)

SUBMITTED: March 10, 1959

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86489
S/078/60/005/008/022/031/XX
B023/B066

Legend to Fig. 1: Fig. 1: Composition of the solid phases in the
system $\text{Na}_2\text{GeO}_3 - \text{Ca}(\text{NO}_3)_2 - \text{H}_2\text{O}$



Card 3/3

PEREL'MAN, F.M.; BABIYEVSKAYA, I.Z.

Solubility isotherm (25°) for the system $Y(NO_3)_3 - NH_4NO_2 - HNO_3 - H_2O$. Zhur.neorg.khim. 7 no.6:1479-1481 Je '62.

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova, (MIRA 15:6)
Akademii nauk SSSR.

(Yttrium nitrates) (Solubility)

PEREL'MAN, F.M.; BABIYEVSKAYA, I.Z.

Systems consisting of nitrates of yttrium and gadolinium or lanthanum. Zhur.neorg.khim. 9 no.4:986-990 Ap '64.

(MIRA 17:4)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN SSSR.

BABIYEVSKAYA, I.Z.; PEREL'MAN, P.M.

System $Gd(NO_3)_3 - NH_4NO_3 - HNO_3 - H_2O$. Zhur. neorg. khim. 10 no.3:
681-683 Mr 365. (MIRA 18:7)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova
AN SSSR.

BABIYEVSKIY, K-K.

The action of aqueous methylamine on (arylsulfonyl) glycines and their N-substituted derivatives. L. N. Nikolenko, K. K. Babiyevskiy, and V. A. Kopyug (D. I. Mendeleev Chem. Technol. Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 91, 853-5 (1953); cf. C.A. 48, 123d. The reaction of aq. MeNH₂ with (arylsulfonyl)glycines was investigated. PhSO₂NHCH₂CO₂H (6 g.) heated with 30 ml. 20% aq. MeNH₂ in sealed tube 8 hrs. at 240° gave 66.5% MeSPh. Similarly p-MeC₆H₄SO₂NHCH₂CO₂H gave 78% p-MeC₆H₄SMe, b_p 94°, along with nearly quant. formation of CO₂. p-MeC₆H₄SO₂NPhCH₂CO₂H gave 52.3% PhNH₂ and 50.2% p-MeC₆H₄SMe. p-MeC₆H₄SO₂NHCHMeCO₂H at 270° similarly gave 67% p-MeC₆H₄SMe, while 2-C₆H₅SO₂NHCH₂CO₂H gave 68% 2-C₆H₅SMe, m. 50-1°. Heating 1.14 g. p-MeC₆H₄SH with 10 ml. 20% aq. MeNH₂ 8 hrs. at 240° gave 87% p-MeC₆H₄SMe; similarly p-ClC₆H₄SH gave 59% p-ClC₆H₄SMe. G. M. Kosolapoff

Hose. Just Chem Tech
in D. Mendeleev

MT-Jew

BABIYEVSKIY, K. K.

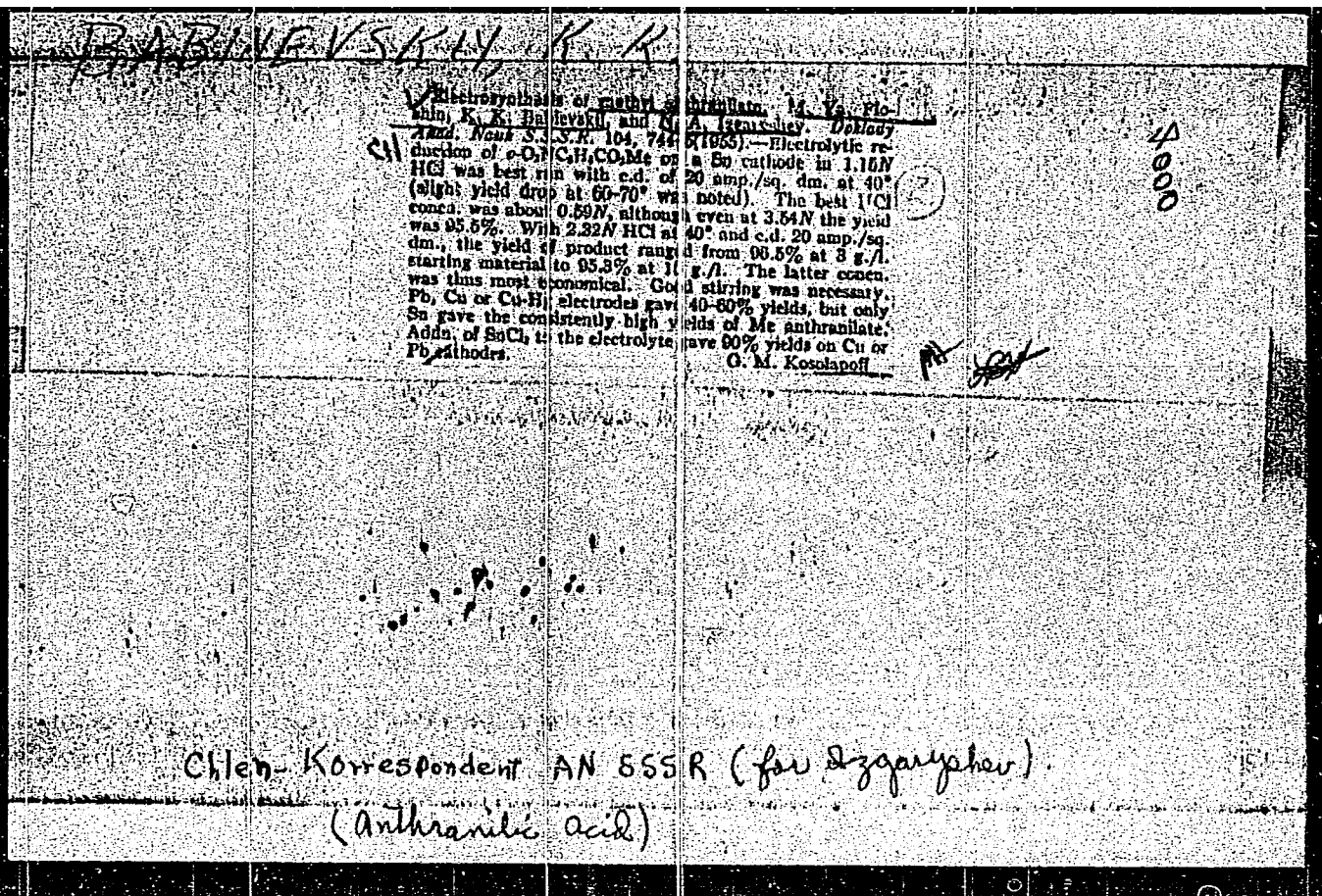
Preparation of alkylanlines. L. N. Nikolenko and K. K. Babievskii. J. Gen. Chem. U.S.S.R. 25, 2195-8(1955) (Engl. translation).—See C.A. 50, 9314b. B. M. R.

БАБИЙЕВСКИЙ, К. К.

[illegible]

and 1 m. at 160°
77% A; Cal. CAR
102.5° m. 60-
102.5° m. 99.2%
Cal. m. 63.5-4°
ave the m. m.
O gave p-chloro-
ones, listed above
med. H₂O and
70° gave the amine
6° Me. in 100-0.5°
70.5° (Ac deriv.,
8° (Ac deriv., m°
° (Ac deriv., m°
deriv., m. 116.5°)
unacetylated Zn
d. HCl, with addn.
and dissolved; gave
Ac deriv., m. 91-
0° (Ac deriv., m.
35-40° (Ac deriv.,
115-20° by 211-
H₂Cal. Cal. m.
M. Kreschall

Chen



17.10.1957
NOVOKOV, S.S.; KORSÁKOVA, I.S.; BABIYEVSKIY, K.K. (Moskva).

Addition reaction of nitroalkanes with compounds having activated
double bonds. Usp.khim. 26 no.10:1109-1124 0 '57. (MIRA 10:10)
(Nitro compounds) (Paraffins)

БАБИЙЕВСКИЙ, К. К.

79-1-50/63

AUTHORS: Nikolenko, L. N. , Babiyeveskiy, K. K.

TITLE: Investigations in the Field of Aromatic Compounds With a Long Side Chain (Issledovaniye v oblasti aromaticheskikh soyedineniy s dlinnoy bokovoy tsep'yu) II. Synthesis of Dodecylaniline by Ammonolysis of p-Chlorododecylbenzene (II. Polucheniye dodetsilanilina ammonolizom p-Chlorododetsilbenzola)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol.28, Nr 1, pp.238-240 (USSR)

ABSTRACT: No publications were hitherto made on the synthesis of p-n-dodecylaniline according to the general reduction method of nitro-compounds. In the preceding papers by the authors it was shown that this compound as well as a number of aniline homologues, which have a normal aliphatic chain in para-position to the amino group, can be obtained by reduction of alkyl-(4-aminophenyl)-ketones with amalgamated zinc in hydrochloric acid. The present paper describes the synthesis of p-n-dodecylaniline by means of the substitution of chlorine

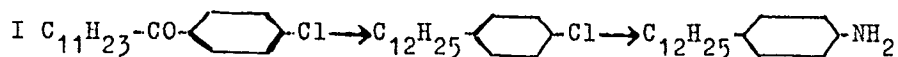
Card 1/3

79-1/50/63

Investigations in the Field of Aromatic Compounds With a Long Side Chain.

II. Synthesis of Dodecylaniline by Ammonolysis of p-Chlorododecylbenzene

by the amino group in p-chlorododecylbenzene. The latter was obtained from p-chlorolaurophenone according to two different methods:



1) According to the one-stage reduction method of p-chlorolaurophenone by the modified method of Kizhner (reference 5) and 2) according to the multi-stage reduction by means of aluminum-isopropylate to dodecyl-(4-chlorophenyl)-carbinol, dehydration of carbinol in a vacuum over potassium bisulfate at 200°C and finally hydrogenation of the obtained p-chlorododecylbenzene over a nickel catalyst. The yield of p-chlorododecylbenzene was in the second case 10% higher than in the first one. It was with a 30% ammonia solution heated for 6 hours to 250°C in the presence of cuprous chloride and was converted to p-dodecylaniline (see scheme (II)). Thus it was shown that p-dodecylaniline can be obtained by amination of p-chlorododecylbenzene with an 80% yield. There are 6 references, 3 of which are Slavic.

Card 2/3

Investigations in the Field of Aromatic Compounds With a Long Side Chain. 79-1-50/63
II. Synthesis of Dodecylaniline by Ammonolysis of p-Chlorododecylbenzene

ASSOCIATION: Moscow Chemical-Technological Institute imeni
D.I. Mendeleyev
(Moskovskiy khimiko-tekhnologicheskii institut im. D. I.
Mendeleyeva)

SUBMITTED: December 15, 1956

AVAILABLE: Library of Congress

Card 3/3 1. Chemistry 2. Cyclic compounds-Synthesis

AUTHORS: Vorozhtsov, N. N., jun., SOV/156-58-2-31/48
Przhiyalgovskaya, N. M., Babiyeveskiy, K. K.

TITLE: On the Problem of the Mechanism of Catalytic Isomerization of
the Naphthalene Monochloride (K voprosu o mekhanizme kataliticheskoy izomerizatsii monokhlornaftalinov)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya
tekhnologiya, 1958, Nr 2, pp. 328 - 329 (USSR)

ABSTRACT: The authors proved earlier (Ref 1) that only hydrogen chloride
and hydrogen bromide enter into the exchange reaction in the
interaction between the naphthalene haloids and hydrogen
haloids on aluminum oxide at 350°. This reaction does not
take place in the case of hydrogen fluoride. However, the
incapacity of the naphthalene fluorides of isomerization
cannot be considered as proved. Since data are lacking in
publications, the authors tried to carry out the isomerization
of the naphthalene monochloride under conditions which render
an exchange reaction impossible. Naphthalene Fluoride was
caused to pass through aluminum oxide at 350°. At the same
time gaseous hydrogen fluoride was introduced into the tube.
The experimental results showed that the naphthalene fluoride

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On the Problem of the Mechanism of Catalytic Isomerization of the Naphthalene Monochloride

SOV/156-58-2-31/48

cannot be isomerized under these conditions, in contrast to naphthalene bromides and -chlorides (Ref 1). This fact enabled the authors to carry out experiments in order to clear the rules governing the intramolecular displacement of the haloid in the isomerization of the naphthalene monochlorides. The first Author (Ref 2) proved by means of tracer atoms that in the catalytic isomerization of 1-naphthalene chloride at 355 - 365° on an Al-Si catalyst chlorine is shifted mainly (93,8% at least) to the position 2. It was interesting to explain how chlorine would behave in the 1-naphthalene chloride under isomerization conditions, if the adjacent position 2 is occupied by a fluorine atom. It is proved that fluorine does not change its position. For this purpose the isomerization of the 1-chloro-2-fluoro naphthalene by means of passing through aluminum oxide in a hydrofluoric acid current was tried. The experiments proved that 1-chloro-2-fluoro naphthalene is not isomerized. 1-chloro naphthalene is transformed into the 2-isomer (33%) under the same conditions. This evidence may be considered as an additional confirmation of the transition of a chlorine

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On the Problem of the Mechanism of Catalytic Isomerization of the Naphthalene Monochloride

SOV/156-58-2-31/48

atom only from position 1 to 2. The fact that chlorine does not occupy another unoccupied position (e.g. position 4) points to the earlier mentioned (Ref 2) mechanism of the intramolecular isomerization of the naphthalene monochlorides which permits the intermediate formation of halogenonium ions. An experimental part follows. There are 7 references, 2 of which are Soviet.

ASSOCIATION: Kafedra tekhnologii organicheskikh krasiteley i promezhutochnykh produktov Moskovskogo khimiko-tekhnologicheskogo instituta im. D.I.Mendeleyeva (Chair of Technology of Organic Dyes and Intermediate Products of the Moscow Institute of Chemical Technology imeni D.I.Mendeleyev)

SUBMITTED: October 1, 1957

Card 3/4

On the Problem of the Mechanism of Catalytic Isomeri-
zation of the Naphthalene Monochloride

SOV/156-58-2-31/48

Card 4/4

5(3)

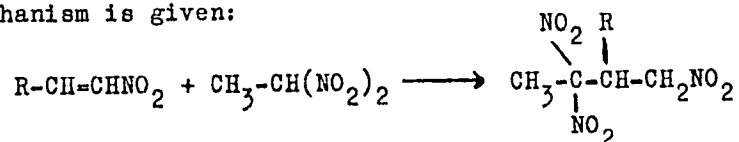
SOV/62-59-8-23/42

AUTHORS: Novikov, S. S., Korsakova, I. S., Babiyevskiy, K. K.

TITLE: Addition of 1,1-Dinitroethane to 1-Nitroalkene-1

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 8, pp 1480-1481 (USSR)

ABSTRACT: Here the addition of dinitroalkane with a mobile H-atom to nitroalkenes is investigated. An addition of similar kind has not yet been described. The initial materials were 1-nitropropene-1, -butene-1, and -pentene-1. The addition was carried out in methyl alcohol + 10% H₂O. The reaction took place quickly at 60° in the presence of small quantities of sodium acetate. The following mechanism is given:



R = H, CH₃, C₂H₅, n.-C₃H₇

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Addition of 1,1-Dinitroethane to 1-Nitroalkene-1

SOV/62-59-8-23/42

In the addition of 1,1-dinitroethane to nitroethylene ramifications may form which are caused by the polymers of the latter forming during the reaction. The addition reactions are described in detail in the experimental part. There are 7 references, 1 of which is Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy, Academy of Sciences, USSR)

SUBMITTED: July 19, 1958

Card 2/2

5(3)
 SOV/20-124-3-27/67
 AUTHORS: Novikov, S. S., Faynzil'berg, A. A., Shevelev, S. A.,
 Korsakova, I. S., Babiyeviskiy, K. K.

TITLE: On an Interesting Case of Isomerization in the Series of
 Saturated Aliphatic Nitro-Compounds (Ob interesnom sluchaye
 izomerizatsii v ryadu nasyshchennykh alifaticheskikh nitro-
 soyedineniy)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 3: pp 589-591
 (USSR)

ABSTRACT: In the presence of ammonia, 1,1,1,3-tetranitropropane is
 rearranged into the symmetric isomeric 1,1,3,3-tetranitro-
 propane, which is precipitated as a diammonium salt. Besides,
 a small quantity of 1,1,3-trinitropropane is formed. If ammonia
 is replaced by stronger organic or inorganic bases, no sym-
 metric tetranitropropane but only 1,1,3-trinitropropane is
 formed. The formation of the last-mentioned compound is effect-
 ed by the splitting-off of a nitro group by the action of the
 bases. Whereas, in the presence of ammonia, the isomerization
 of 1,1,1,3-tetranitropropane into symmetric tetranitropropane
 occurs parallel to this splitting-off reaction, it is suppressed
 in the presence of strong bases. - The reaction occurs at 0°C

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SOV/20-124-3-27/67

On an Interesting Case of Isomerization in the Series of Saturated Aliphatic Nitro-Compounds

in an aqueous alcohol solution (it can not be effected in non-polar solvents). The yield of the symmetric diammonium salt was 40%. This salt is transformed, by potassium chloride, into the potassium salt, the latter being eventually converted into 1,3-dibromo-1,1,3,3-tetranitropropane. In the paper under review, these compounds have been described for the first time. The transformation of 1,1,1,3-tetranitropropane into the symmetric isomer is the first so far observed case of an isomerization by change of place of a nitro group in saturated aliphatic nitro-compounds. - The paper contains a detailed recipe for the isomerization of 1,1,1,3-tetranitropropane, for the preparation of the symmetric potassium salt, as well as of the 1,3-dibromide, and for the preparation of 1,1,3-trinitropropane in the presence of dimethylamine. There is 1 reference.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

Card 2/3

5(3)

SOV/20-125-3-26/63

AUTHORS:

Novikov, S. S., Babiyeviskiy, K. K., Korsakova, I. S.

TITLE:

The Synthesis of Aci-nitro-alkanes (Sintez atsi-nitroalkanov)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 3, pp 560-561 (USSR)

ABSTRACT:

Several examples of the addition of simplest mononitro-alkanes (Refs 1,2) as well as of the 1,1-dinitro-ethane (Ref 3) to the 2-nitro-alkanes are known. The authors assume that trinitro-methane will react with the last mentioned substances more easily than other nitro-alkanes since its hydrogen is more mobile. It was found that this reaction leads to the formation of white crystalline substances in aqueous methanol below 0° if the reaction products are quickly separated by dilution with ice-water. For in this case aci-1,1,1,3-tetranitro-alkanes are produced in an almost quantitative yield. Reliable data on the formation of the aci-form of the free aliphatic nitrohydrocarbons have hitherto been lacking. Their structure was now confirmed by an infrared spectrum. The obtained substances yield characteristic color reactions of the aci-nitro compounds: their solutions in ether turn lightblue under the action of acetyl

Card 1/2

The Synthesis of Aci-nitro-alkanes

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chloride (Ref 7) and red in the case of additions of FeCl_3 (Ref 8). They may be stored at the temperature of dry ice. Aci-1,1,1,3-tetranitro-butane reacts quickly with bromine in a volatile solution (in the absence of alkalies) and forms 3-bromo-1,1,1,3-tetranitro-butane. An assumed reaction mechanism is illustrated in a diagram. An experimental part gives the usual data. There are 8 references, 1 of which is Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy or the Academy of Sciences, USSR)

PRESENTED: November 13, 1958, by A. V. Topchiyev, Academician

SUBMITTED: November 12, 1958

Card 2/2

BAKUYEVSKIY, K.K.

5-36/0

5/020/60/132/04/31/064
2011/0003

AUTHORS:

Portkov, S. S., Parnell, Boris, A. A., Shavelov, S. A.,
Korotkova, I. S., Belyavskiy, K. K.

TITLE:

Isomerization of tetranitroalkanes

PERIODICAL:

Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 4,
pp. 640-643

TEXT: In the article under review the authors found that 1,1,1,3-tetra-
nitropropane is isomerized to a symmetrical tetranitropropane (II)
not only in the presence of ammonia but also by the action of some
other alkaline agents such as potassium acetate and acetylate. The
nature of the solvent determines the course of reaction. In alcohol
the reaction of 1,1,1,3-tetranitropropane leads to isomerization
with potassium acetate, thus forming 1,1,1,3-tetranitropropane (yield
21 per cent). Isomerization does not occur in an alcohol-acetone
mixture. If the nitro group is split off, and 1,1,1,3-trinitropropane
is obtained, in the presence of potassium acetate (in methanol),
1,1,1,3-tetranitropropane (I) is isomerized to the symmetrical

Isomerization of tetranitroalkanes

5/020/60/132/04/31/064
2011/0003

tetranitropropane (II) in a yield of 10.6 per cent. The authors wanted
to see whether isomerization is only characteristic of 1,1,1,3-tetra-
nitropropane. For this purpose they studied the behavior of 1,1,1,3-
tetranitropropane and 1,1,1,3-tetranitropropane toward bases. Unlike
1,1,1,3-tetranitropropane, these tetranitroalkanes occur in two
stable forms, a true and an isomeric form (tetranitroalkanes). The authors found
that the isomeric form of tetranitropropane (III) isomerizes to
1,1,1,3-tetranitropropane (IV) by the action of potassium acetate
in alcohol (yield 34.5 per cent). Potassium acetate in acetone
(yield 36.7 per cent) and alcoholic caustic potash (yield 12.1 per cent)
displays a similar effect. Isomerization also occurs in the presence of
form of 1,1,1,3-tetranitropropane (III) is isomerized to 1,1,1,3-
tetranitropropane (IV) in the presence of potassium acetate (yield 34.5 per
cent), but unlike the reaction of potassium acetate (yield 34.5 per
cent), the isomeric form of 1,1,1,3-tetranitropropane (IV) may be
isomerized in the way described above. The isomeric form of 1,1,1,3-
tetranitropropane (IV) isomerizes only in the presence of
potassium acetate. Thus, 1,1,1,3-tetranitropropane (VI) (yield 12.5

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Card 4/4

Isomerization of Tetranitroethane
 PREPARED: January 9, 1960, by A. T. Topchiyev, Academician
 SUBMITTED: January 9, 1960

Isomerization of Tetranitroethane
 S/C20/50/132/04/31/064
 8011/8003

per cent) is formed. The true form of 1,1,1,3-tetranitroethane (IV b) cannot be isomerized in the presence of catalytic agents. 1,1,1,3-tetranitroethane and 1,1,1,3-tetranitroethane (IV b) are not isomerized either in the presence of acid or in the presence of alkali. It is established that the two forms isomerize more readily than the two forms. For this reason they assume that the isomerization of 1,1,1,3-tetranitroethane passes through the stage of the acy form. The isomerization of (IV), (III), and (VI) were obtained as potassium salts. By breaking down the potassium salts into the corresponding acids, the authors draw the conclusion that isomerization is accompanied by a shift of the nitro group. The authors also draw the conclusion that isomerization represents a general reaction of the nitro group in a straight chain of carbon atoms. There are 3 tetranitroethanes, 2 of which are Soviet.

ASSOCIATION: Institute of Organic Chemistry, USSR Academy of Sciences, Moscow, U.S.S.R.
 Address: 125080, Moscow, U.S.S.R.
 N. D. Zelinsky Institute of Organic Chemistry, 119334, Moscow, U.S.S.R.

NOVIKOV, S.S.; KORSAKOVA, I.S.; BABIYEVSKIY, K.K.

Synthesis of 1,4-dinitro-1,3-butadiene. Izv. AN SSSR Otd. khim.
nauk no. 5:944-945 My '60. (MIRA 13:6)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo Akademii
nauk SSSR.
(Butadiene)

NOVIKOV, S.S.; BABIYEVSKIY, K.K.; SHLYAPOCHNIKOV, V.A.

Synthesis and spectra of deuterioform. Dokl. AN SSSR
141 no.4:875-876 D '61. (MIRA 14:11)

1. Institut organicheskoy khimii AN SSSR. Predstavleno akademikom
A.V. Topchiyevym.
(Nitroform--Spectra) (Deuterium compounds)

NOVIKOV, S.S.; BABIYEVSKIY, K.K.; SHEVELEV, S.A.; IVANOVA, I.S.; FAYNZIL'BERG, A.A.

Synthesis of 1,1,1,3,-tetranitro-2-alkylpropanes and their cleavage
by the action of bases. Izv. AN SSSR.Otd.khim.nauk no.10:1853-1855
O '62. (MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Propane) (Bases (Chemistry))